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revive with the most promising vigor in response to a reorganization that placed the school on a worthy basis. The demand for well-educated, refined and thoroughly-trained nurses is such that salaries have doubled within the last twenty years. During this season of financial and business depression the capable nurse is singularly exempt from the prevalent hard times.

We owe more to the Department of Nursing and Health in Teachers' College for the awakening of interest in nursing education than to any other cause. This department was established about fourteen or fifteen years ago by a group of enthusiastic, ambitious nurses through the liberality and coöperation of Columbia University. It started with a class of two students. The classes have grown until the enrollment this year is sixty-seven. The students are women who realize through experience their need for better preparation as executives, instructors and health workers. They go from the college to all parts of the country, carrying their ideals of thoroughness, educational efficiency and of justice to the student nurse as well as service to the patient and the doctor.

More college women are coming into the training schools every year. Nursing magazines and text-books edited by nurses are rapidly increasing in number and excellence and there is every reason to believe that within a few years nursing will be looked upon as a profession requiring not only the angelic virtues but ability and education.

THE CONQUEST OF CONTAGION¹

By CHARLES FLOYD BURROWS, M.D.

Syracuse, N. Y.

The Biblical history of the Garden of Eden records many interesting things. A careful search of it, however, fails to reveal any mention of the nursery days of Adam and Eve's children. Probably though, it is safe to assume that like the youngsters of today they suffered from measles, mumps, whooping cough, scarlet fever and other catching maladies, for without doubt it was at this early era in the world's development that contagious germs of all kinds began to sit up and take notice of the physical realm they were maliciously to invade. Ever since those far off days down to the present time mankind has been unmercifully flayed by the diseases which infectious bacterial

¹ Read at the thirteenth annual meeting of the New York State Nurses' Association, Syracuse, N. Y., October 21, 1914.

villains originated and have since propagated. As the centuries have come and gone contagion has skulked along its unseen pathways always hovering near for a vicious attack upon ignorant, terrified humanity. At some periods of history it has stealthily invaded the haunts of civilization in the form of the plague, levying its ghastly toll in merciless fashion; at other times it has come garbed in the habiliments of smallpox and has taken its tribute in millions; at others still it has appeared in the disguise of diphtheria or scarlet fever or measles and has smitten myriads. Since first the feet of man began their weary struggling tread upon this globe, rock ribbed and ancient as the sun, hosts upon hosts have been struck down and gathered to its bosom from the terrific onslaughts of various contagions. It has been authoritatively estimated that more than 50,000,000 persons perished from contagious epidemics during the dark ages in Europe where today, in much the same geographical region, to our amazement and horror, a few thousand in comparison have been slain in the ugly pursuit of war. Of course the causes which produced this tremendous medieval devastation of life and which permitted loathsome epidemics to play more deadly havoc than did the noisy and useless wars that usually occurred simultaneously with them, were to be found in the social conditions and the ignorance of those unhappy days instead of in some overwhelming destructive power of contagion itself.

In view of these appalling mortality facts is it any wonder that, since the murky dawn centuries ago in distant Egypt and Greece, when the light of inquiry first began to steal faintly into men's minds concerning the subtle mysteries of disease, communicable disorders, so seemingly mysterious and uncanny in their spread, should have been regarded with horror and dismay or that their dangers, enhanced a hundred fold by fear and superstition, should have surrounded them in the professional as well as in the lay mind with an exaggerated subtlety of diffusion? When an enemy is in ambush using smokeless powder and Maxim silencers, soldiers unable to locate the point of attack are likely to become panic-stricken and hastily infer that they are surrounded on all sides by hostile bullets, for an unseen danger is usually more terrifying and mystifying than the visible and more liable to be over-estimated. To be sure, contagious germs wear no gaudy uniforms nor do they trumpet their attacks loudly, yet their forays are made with ferocity along direct avenues and largely through close personal contact; for latter-day observation has firmly proved that, aside from exceptional instances, the majority of all contagious diseases are acquired by direct exposure and rarely, if ever, conveyed by a second or intermediate person to the third.

By direct contagion is meant a route so conclusive as to be reasonable of belief. If a physician takes the temperature of a diphtheretic by mouth and negligently fails to cleanse his thermometer before introducing it within the oral cavity of his next patient, it is admitted that contagion may follow. If a man ill of nasal diphtheria blows and wipes his nose with his fingers and milks a herd of cows that supply a milk route, the development of diphtheria among his customers is mightily conclusive proof that he is the contagious agent, especially when the Klebs-Loeffler bacilli are found in the milk. But when one tries to argue, as Dr. Holt does, that letters received and handled by a scarletina case and then tucked away in an attic for twenty years will produce scarlet fever; when one accuses the cleanly physician of carrying infection on his clothes or person; or when one tries to explain to the anxious and querulous family by any of the numerous moss-covered, far-fetched theories familiar to all that pass current among the laity, how "Jimmy got it," he exposes his credulity and imposes upon that of his clientele. So long as the indiscriminate interchange of milk bottles is in its present lax, unrestrained condition; so long as desquimating children attend school for several days before being detected; and so long as diphtheria, nasal, pharyngeal and laryngeal, is overlooked by the inattention of heedless parents or is undiscovered by the physician who depends upon one culture or none at all, as alas often happens in cases of so-called tonsillitis, croup and coryza, it is undeniable and indisputable that contagion will flourish easily and luxuriantly.

Therefore it should not be necessary in the face of these facts, except in isolated instances, for anyone but an imaginative dreamer to feel compelled to fabricate an implausible and unscientific explanation of how contagion accomplishes rapid transit. We know that typhoid fever is sometimes conveyed by the oyster and occasionally, perhaps, in other erratic, devious ways, but there is no denying the fact that the number of cases so produced in the ordinary community is negligible compared with those arising from infected flies, milk and drinking water. There is no doubt, either, but that contagions of various sorts are sometimes transmitted and induced in crooked and obscure ways by wearing apparel, letters, money, cats and dogs, but the point emphasized is that these and other infrequent, unproved channels of infection, which are inclined to be exaggerated with holy horror and proscribed with stern, apprehensive visages, are as nothing compared with those which are flippantly ignored. If contagious sicknesses were as contagious as they are popularly supposed to be and were communicated in the promiscuous manner so many devoutly believe and dread, this city would be as defunct as Pompeii in a year.

Students were taught, only a few years ago, that malaria was spread by "foggy night air," by "miasma" (whatever that might have been), and by other mysterious, mistaken means. With the present knowledge concerning the rôle which the anopheles mosquito plays in transmitting "fever and ague," we smile at these former silly beliefs. It can be safely prophesied that soon, in the light of more exact knowledge, we shall be similarly amused over many of the absurd ideas which the various camps of medicine today hold concerning the dissemination of contagious diseases. Then, perhaps, outlandish maneuvers like imprisoning and impoverishing a whole family and adding insult to injury by fumigating them with formaldehyde, will appear as ludicrous and crude as some of the antics of my antique predecessors, the barber physicians.

In view of the evidence we must recognize that the time has come when the fear of contagions ought to be modified and ruled by common sense. If a horse is dangerous only when he kicks it is silly to be frightened by his whinny. The important precaution is to avoid his heels and hoofs. In most communities the attitude of extreme caution toward contagious illnesses is practically the same as it was thirty or more years ago. The shadow still causes as much consternation as the substance. So needless anxiety, increased expense and harsh quarantine methods are the tributes paid on account of the old fashioned "bogy" ideas of air-borne contagion and other "foggy," heirloom visions of dangerous channels of infection handed down by generations of frightened ancestors.

(To be continued).

THE MAKING OF SOLUTIONS¹

By MAUD LANDIS, R.N.

Kansas City, Mo.

Whether the school girl does not make practical application of her arithmetical problems or whether the time between her high school graduation and her entrance into the training school has allowed her to forget what she has learned, I cannot say, but it has been my observation that most nurses have only a vague understanding of how to make solutions for general use in the hospital or when they are out in private practice.

During training, we may call the pupil nurse's attention to the necessity of separating poisons from other medicines; by distinguishing poisons from other drugs, in using colored bottles, or bottles oddly

Read at the eighth annual meeting of the Missouri State Nurses' Association.